



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,868	01/29/2004	Tatsuzo Osawa	19546.0052	2627

23517 7590 10/19/2007 BINGHAM MCCUTCHEN LLP 2020 K Street, N.W. Intellectual Property Department WASHINGTON, DC 20006		EXAMINER BELANI, KISHIN G
ART UNIT 2143	PAPER NUMBER	
MAIL DATE 10/19/2007	DELIVERY MODE PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/765,868	Applicant(s) OSAWA, TATSUZO	
	Examiner Kishin G. Belani	Art Unit 2143	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

This action is in response to Applicant's amendment filed on 8/16/2007. The abstract and the specifications have been corrected to remove minor informalities. Therefore, the objection to the specification has been withdrawn. **Independent claims 1, 4 and 7 have been amended. Dependent claims 2-3, 5-6 and 8-9 have also been amended** to correct minor informalities. As a result, objection to claims 1, 4 and 7 have been withdrawn. **Claims 1- 9 are now pending** in the present application. The applicant's amendments are shown below in ***bold and italics***, and the examiner's response to the amendments is shown in **bold** in this office action. **This Action is made FINAL.**

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-9 are rejected under 35 U.S.C. 102(e) as being anticipated by Shaffer et al. (U.S. Patent Publication # 7,107,334 B1).

Consider **claim 1**, Shaffer et al. clearly show and disclose a method for testing a network system **device** by controlling, by a data controller in a **the** network device, communication data transferred between an external device connected to the network device via a network and a plurality of virtual machines in the network device (Fig. 1 that shows a network system comprising client machine 102, networks 104 and 108, server 110, and network **device** (router) 106 logically connected to test device 112 and capable of replicating and redirecting data packets to test device 112; Flowchart in Fig. 2 that discloses how the router receives data packets, identifies the packets of interest to replicate, and transmits the original packets to server 110 and the replicated packets to test device 112; column 5, lines 10-16, 30-34, and 49-66; column 6, lines 4-7 and 13-15 that describe the same details), comprising:

a reception step of receiving the communication data (Fig.1 showing data being received from client 102 to server 110 via router 106 and vice versa; Fig. 2, block 206 showing packets of data being received; column 5, lines 12-16 which disclose the flow of data packets among client 102, router 106, and server 110);

a judgment step of judging whether the received communication data coincides with a condition by referring to a test access control list which defines association between the condition concerning an attribute of the communication data and an action serving as a process of permitting or rejecting communication of the communication data (Fig. 2, block 208 showing a judgment step of identifying data packets of interest; block 210 showing replication of the packets of interest (i.e. test packets), so that they may be redirected to the test device 112 acting as a virtual test machine, while the network is

operating with data being communicated between client 102 and server 110; column 5, lines 52-64 which disclose different means for identifying test packets for replication, including source and destination IP addresses in the packet header; thereby providing means equivalent to a test access control list); and

an execution step of executing, when it is judged in the judgment step that the communication data coincides with the condition, the process serving as the action in the test access control list (Fig. 2, blocks 212 and 214 that show how the original packets are directed between the client 102, router 106, and server 110, whereas the replicated packets are transmitted to the test device 112; **column 6, lines 13-15 disclose the same details**).

Consider **claim 2**, and **as applied to claim 1 above**, Shaffer et al. disclose a method for testing a network ~~system~~ **device** wherein the condition concerning the attribute of the communication data includes address information for identifying the location on the network of the external device or the network device serving as a transmitter or a receiver of the communication data (column 5, lines 55-64 which disclose that the source and destination IP addresses in the packet header may be used to identify the location on the network of the external device), and the judgment step includes judgment of whether address information included in the received communication data coincides with the condition concerning the attribute of the communication data (column 5, lines 52-55 which describe the judgment step of

identifying whether the packet is to be directed to the server 110 (or client 102) or test device 112).

Consider **claim 3**, and **as applied to claim 1 above**, Shaffer et al. disclose a method for testing a network system **device** further comprising an addition step of adding, to the received communication data, a necessary attribute for judging whether the communication data coincides with the condition in the judgment step (Fig. 2, block 214 which shows that the replicated packets are addressed to the test device 112 along second routing path; column 5, lines 55-61 and column 6, lines 13-15 that describe the same process, thereby disclosing that a new IP address (of test device 112) is being added to the replicated packets, so that the packets can be transmitted to the test device 112 based on the newly added IP address to their headers).

Consider **claim 4**, Shaffer et al. clearly show and disclose a computer-readable medium encoded with a network system **device** testing program for causing a computer to operate as a network device controlling communication data transferred between external devices interconnected via a network, the program causing the computer to perform a process (Claim 20; column 9, lines 18-29 that disclose a machine readable medium with program instructions to perform the functions related to the disclosed invention; Fig. 1 that shows a network system comprising client machine 102, networks 104 and 108, server 110, and network **device** (router) 106 logically connected to test device 112 and capable of replicating and redirecting data packets to test device 112;

Flowchart in Fig. 2 that discloses how the router receives data packets, identifies the packets of interest to replicate, and transmits the original packets to server 110 and the replicated packets to test device 112; column 5, lines 10-16, 30-34, and 49-66; column 6, lines 4-7 and 13-15 that describe the same details) comprising:

a reception step of receiving communication data transmitted from one of the external devices or communication data transmitted from a virtual machine in the network device (Fig. 1 showing data being received from client 102 to server 110 via router 106 and vice versa; Fig. 2, block 206 showing packets of data being received; column 5, lines 12-16 which disclose the flow of data packets among client 102, router 106, and server 110);

a judgment step of judging whether the received communication data coincides with a condition by referring to a test access control list which defines association between the condition concerning an attribute of the communication data and an action serving as a process of permitting or rejecting communication of the communication data (Fig. 2, block 208 showing a judgment step of identifying data packets of interest; block 210 showing replication of the packets of interest (i.e. test packets), so that they may be redirected to the test device 112 acting as a virtual test machine, while the network is operating with data being communicated between client 102 and server 110; column 5, lines 52-64 which disclose different means for identifying test packets for replication, including source and destination IP addresses in the packet header; thereby providing means equivalent to a test access control list); and

an execution step of executing, when it is judged in the judgment step that the communication data coincides with the condition, the process serving as the action in

Art Unit: 2143

the test access control list (Fig. 2, blocks 212 and 214 that show how the original packets are directed between the client 102, router 106, and server 110, whereas the replicated packets are transmitted to the test device 112; **column 6, lines 13-15 disclose the same details**).

Consider **claim 5**, and **as applied to claim 4 above**, Shaffer et al. disclose a computer-readable medium encoded with a network ~~system~~ **device** testing program wherein the condition concerning the attribute of the communication data includes address information for identifying the location on the network of the external device or the network device serving as a transmitter or a receiver of the communication data (column 5, lines 55-64 which disclose that the source and destination IP addresses in the packet header may be used to identify the location on the network of the external device), and wherein the judgment step includes judgment of whether address information included in the received communication data coincides with the condition of the attribute of the communication data (column 5, lines 52-55 which describe the judgment step of identifying whether the packet is to be directed to the server 110 (or client 102) or test device 112).

Consider **claim 6**, and **as applied to claim 4 above**, Shaffer et al. disclose a computer-readable medium encoded with a network ~~system~~ **device** testing program further comprising: an attribute adding step of adding, to the received communication

data, a necessary attribute for judging whether the communication data coincides with the condition in the judgment step (Fig. 2, block 214 which shows that the replicated packets are addressed to the test device 112 along second routing path; column 5, lines 55-61 and column 6, lines 13-15 that describe the same process, thereby disclosing that a new IP address (of test device 112) is being added to the replicated packets, so that the packets can be transmitted to the test device 112 based on the newly added IP address to their headers).

Consider **claim 7**, Shaffer et al. clearly show and disclose a ~~network-system testing apparatus~~ **device** for controlling communication data transferred between external devices interconnected via a network (Fig. 1 that shows an apparatus for testing a network system comprising client machine 102, networks 104 and 108, server 110, and network **device** (router) 106 logically connected to test device 112 and capable of replicating and redirecting data packets to test device 112; Flowchart in Fig. 2 that discloses how the router receives data packets, identifies the packets of interest to replicate, and transmits the original packets to server 110 and the replicated packets to test device 112; column 5, lines 10-16, 30-34, and 49-66; column 6, lines 4-7 and 13-15 that describe the same details), comprising:

reception means for receiving communication data transmitted from one of the external devices or communication data transmitted from a virtual machine in the network device (Fig.1 showing data being received from client 102 to server 110 via router 106 and vice versa; Fig. 2, block 206 showing packets of data being received; column 5, lines 12-16

which disclose the flow of data packets among client 102, router 106, and server 110, thereby providing the reception means);

a test access control list which defines association between a condition concerning an attribute of the communication data and an action serving as a process of permitting or rejecting communication of the communication data when the communication data coincides with the condition; judgment means for judging, by referring to the test access control list, whether the received communication data coincides with the condition (Fig. 2, block 208 showing a judgment step of identifying data packets of interest; block 210 showing replication of the packets of interest (i.e. test packets), so that they may be redirected to the test device 112 acting as a virtual test machine, while the network is operating with data being communicated between client 102 and server 110; column 5, lines 52-64 which disclose different means for identifying test packets for replication, including source and destination IP addresses in the packet header; thereby providing means equivalent to a test access control list);

and execution means for executing the action in the test access control list when it is judged by the judgment means that the communication data coincides with the condition (Fig. 2, blocks 212 and 214 that show how the original packets are directed between the client 102, router 106, and server 110, whereas the replicated packets are transmitted to the test device 112, thereby disclosing the means for executing the invented processes; **column 6, lines 13-15 disclose the same details**).

Consider **claim 8**, and **as applied to claim 7 above**, Shaffer et al. disclose a ~~network-system-testing-apparatus~~ **device** wherein the condition concerning the attribute(s) of the communication data includes address information for identifying the location on the network of the external device or the network device serving as a transmitter or a receiver of the communication data (column 5, lines 55-64 which disclose that the source and destination IP addresses in the packet header may be used to identify the location on the network of the external device), and the judgment means judges whether address information included in the received communication data coincides with the condition concerning the attribute(s) of the communication data (column 5, lines 52-55 which describe the judgment step of identifying whether the packet is to be directed to the server 110 (or client 102) or test device 112).

Consider **claim 9**, and **as applied to claim 7 above**, Shaffer et al. disclose a ~~network-system-testing-apparatus~~ **device** further comprising attribute adding means for adding, to the received communication data, a necessary attribute for judging, by the judgment means, whether the communication data coincides with the condition (Fig. 2, block 214 which shows that the replicated packets are addressed to the test device 112 along second routing path; column 5, lines 55-61 and column 6, lines 13-15 that describe the same process, thereby disclosing that a new IP address (of test device 112) is being added to the replicated packets, so that the packets can be transmitted to the test device 112 based on the newly added IP address to their headers).

Response to Arguments

Applicant's arguments filed 08/16/2007 have been fully considered but they are not persuasive.

The examiner respectfully disagrees with applicant's arguments as the applied reference(s) provide more than adequate support and clarification. The examiner's rejection of 03/27/2007 is maintained.

In reference to **claims 1, 4 and 7**, the examiner disagrees with the applicant's argument that Shaffer does not disclose any virtual machines in the network device 106. The virtual machines are no more than software code to perform the specified function of redirecting network data flow, which is also performed by the software in the router; although not specifically named as a virtual machine, but functionally equivalent nonetheless.

In further reference to **claims 1, 4 and 7**, the examiner disagrees with the applicant's argument that Shaffer does not disclose network device receiving the communication data; judging based on a test access control list whether to permit or reject communication data; and take an action based on the action specified in the test access control list. As listed in the rejections for these claims, the network device 106 receives communication packets from a client machine 102 and server 110 (column 5, lines 12-15); making judgment based on a test access control list whether to permit or reject communication data (column 5, lines 55-61 which disclose that the router 106 only transfers those packets specifically destined to either server 110 or client 102,

discarding all other packets from being transferred to server 110 or client 102. Although not specifically referencing a test access control list (which in itself is derived from the source and destination IP addresses and ports contained in packet headers), the router does analyze the same fields contained in the same packet headers to arrive at the decision of permitting or rejecting received communication data. Furthermore, once the decision is made, the router takes action to transmit selected packets to either server 110 or client 102 depending upon packet destination (column 6, lines 4-7).

Claims 2-3, 5-6 and 8-9 also remain rejected based on their dependency on **claims 1, 4 and 7** based on the Shaffer's teachings cited above.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

Art Unit: 2143

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Art Unit: 2143

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Kishin G. Belani whose telephone number is (571) 270-1768. The Examiner can normally be reached on Monday-Thursday from 6:30 am to 5:00 pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, David Wiley can be reached on (571) 272-3923. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For


Art Unit: 2143

more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-0800.

Kishin G. Belani
K.G.B./kgb

October 15, 2007


DAVID WILEY
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100